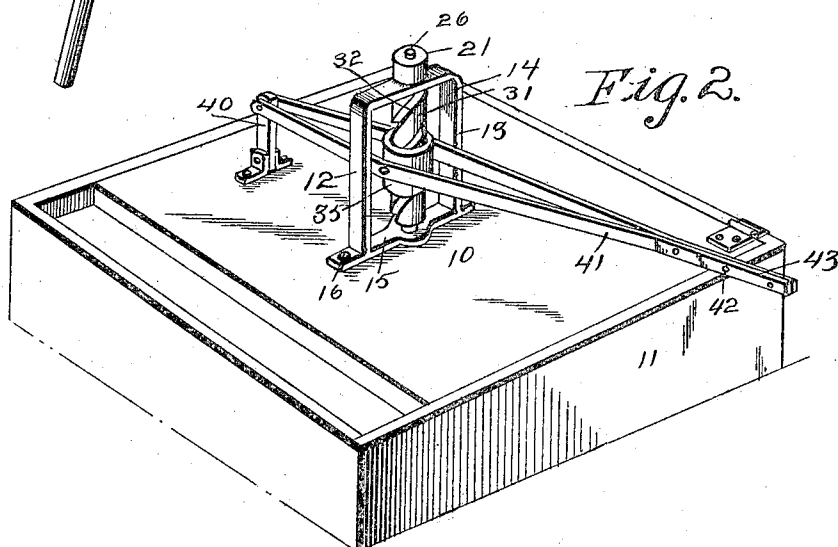
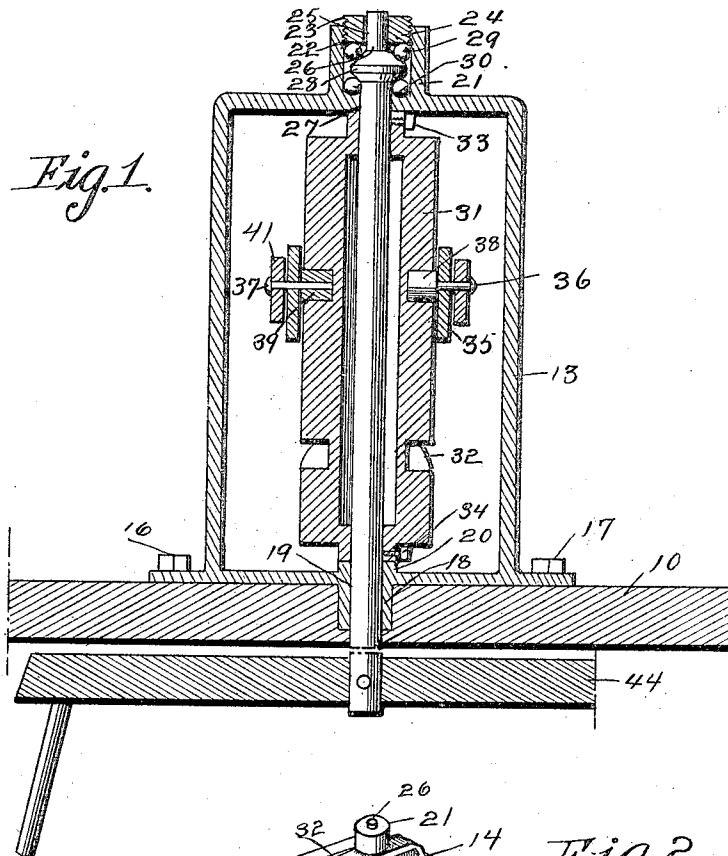


No. 813,015.

PATENTED FEB. 20, 1906.

H. H. MUNSON.
GEARING FOR WASHING MACHINES.
APPLICATION FILED NOV. 28, 1904.



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UNITED STATES PATENT OFFICE

HUGH H. MUNSON, OF TRURO, IOWA.

GEARING FOR WASHING-MACHINES.

No. 813,015.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed November 26, 1904. Serial No. 234,354.

To all whom it may concern:

Be it known that I, HUGH H. MUNSON, a citizen of the United States, residing at Truro, in the county of Madison and State of Iowa, have invented a certain new and useful Gearing for Washing-Machines, of which the following is a specification.

The objects of my invention are to provide a gearing for washing-machines of simple, durable, and inexpensive construction which can be easily and readily attached to the top of the machine and by the use of which a maximum amount of power will be acquired by a minimum amount of manual labor.

A further object is to provide a gearing of this class in which a lever is used and the free end of the lever is swung upwardly and downwardly by the operator in operating the dash of the washing-machine.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view of the gearing, showing it attached to the cover of the washing-machine and showing a portion of the dash in section; and Fig. 2 shows in perspective the top of the washing-machine with my gearing attached to it.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the cover of the washing-machine, which is hinged to the body portion 11 thereof in the ordinary way. Attached to the cover and extending upwardly from its central portion is a frame having two sides 12 and 13 therein, the top portion 14, connecting these sides and integral with them, and the bottom portion 15, which is held securely to the cover 10 by means of the bolts 16 and 17. Extending downwardly from the center of the bottom portion is an annular lug 18, through which there is an opening 19, which also extends through the annular lug 20, which is above the bottom portion 15. This lug 20 forms a bearing for the worm-gear, hereinafter described. Extending upwardly from the top portion 14 of the frame is the ring 21, which is integral with said top portion. This ring has a screw-threaded portion 22 in its upper end designed to receive the screw-threaded portion 23 in its upper end designed to receive the screw threaded

portion 23 of the bearing 24. This bearing 24 has an opening 25 extending through it to receive the upper end of the shaft upon which the dash is mounted.

Mounted inside of the ring 21 and on the dash-shaft 26, which extends through an opening 27 in the top portion 14 and through the opening 19 in the annular lugs 18 and 20 and which has the dash attached at its lower end, is the ball-bearing member 28, which is inclined from its outer edge inwardly toward the shaft upon which it is mounted to receive the balls 29 above the ball-bearing member 28 and the balls 30 below the ball-bearing 28, so that when the shaft is operated the ball-bearing 28 will work freely on the balls 29 and 30, so that there will be a free movement of the shaft 26.

Mounted on that portion of the shaft which is between the upper portion 14 and the lower portion 15 of the frame is a casing 31, having the worm-gear 32 in its outer periphery and extending from its lower portion to its upper portion. This casing is held to the shaft 26 by means of the set-screws 33 and 34, so that the entire mechanism may be easily taken apart. Mounted outside of the casing 31 is a collar 35, which is of sufficient size to move vertically outside of the shaft 26. Extending through diametrically opposite sides of the collar are two pins 36 and 37, upon which are mounted the rollers 38 and 39, respectively, which rollers enter the worm-gear 32 and are designed to rotate in said worm-gear as the collar is moved upwardly and downwardly on the outside of the casing 31.

Pivotaly attached to one side of the cover 10 and substantially parallel with the shaft 26 is the link 40, which extends upwardly from the cover 10. Pivoted to the upper portion of the link 40 is the two-part handle 41, which has one of its parts pivoted to the pin 36 and the other of its parts pivoted to the pin 37 and which has its free ends secured together by rivets 42 to provide the handle 43, which is grasped by the operator in using the device. It will be seen that as the handle is raised upwardly and as the collar is correspondingly raised the casing 31 and the shaft to which it is attached will be rotated in one direction by the rollers moving in the worm-gear 32, and as the handle is moved downwardly these parts will be rotated in the opposite direction. Thus by the raising and lowering of the handle the shaft 26 and the dash which is attached to it will be given an

oscillating movement, which will be accomplished with a minimum amount of power. A dash 44 is secured to the lower end of the shaft 26, and the ordinary tub used in a washing-machine is used, and for that reason a further description is deemed unnecessary.

By providing the screw-threaded bearing 24 the ball-bearing can be constantly kept in condition for use even though the bearing 28 and balls may wear slightly. This is done by simply screwing or unscrewing the bearing 24 in the ring 21.

It will be seen that this device can be easily and readily attached to or detached from the ordinary cover of a washing-machine.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. A frame having openings in its upper and lower portions, a shaft extending through the openings in the frame, a ball-bearing mounted near the upper end of the shaft and at the upper portion of the frame, a worm-gear detachably secured to the shaft and between the upper and lower portions of the frame, a collar surrounding the worm-gear, rollers on the inside of the collar designed to enter the worm-gear, and means for moving the collar vertically.

2. A frame having openings in its upper and lower portions, a shaft extending through the openings in the frame, a ball-bearing mounted near the upper end of the shaft and at the upper portion of the frame, a worm-gear detachably secured to the shaft and between the upper and lower portions of the frame, a collar surrounding the worm-gear, rollers on the inside of the collar designed to enter the worm-gear, a pivotally-mounted link, and a lever pivoted to the link and to the collar, for the purposes stated.

3. In a gearing for washing-machines, a shaft, a worm-gear detachably secured to the shaft, a collar capable of vertical movement along the worm-gear, rollers secured to the collar designed to enter the worm-gear, means for moving the collar vertically to oscillate the shaft, a ball-bearing for supporting the upper end of the shaft, and a frame for supporting the ball-bearing.

4. A substantially rectangular frame provided with a ring at its upper portion, a support therefor, a shaft extending vertically of the frame, a ball-bearing mounted in the ring in the upper portion of the frame for rotatably supporting the shaft, a worm-gear secured to the shaft inside of the frame, a collar encircling the worm-gear and capable of vertical movement, rollers on the inside of the collar entering the worm-gear, and a lever pivoted to the collar and to the top of said support with which the collar may be moved vertically for rotating the shaft.

5. A substantially rectangular frame provided with a ring at its upper portion, a support therefor, a shaft extending vertically of the frame, a ball-bearing mounted in the ring in the upper portion of the frame for rotatably supporting the shaft, a worm-gear detachably secured to the shaft inside of the frame, a collar encircling the worm-gear and capable of vertical movement, rollers on the inside of the collar entering the worm-gear, a lever pivoted to the collar and to the top of said support, with which the collar may be moved vertically for rotating the shaft, and means for securing the frame to the top of a washing-machine.

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Witnesses:

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